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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,948	10/26/2001	Thomas Samuel Zemanian	E-13260	2515
7590 10/14/2004				
Douglas E. McKinley, Jr. McKinley Law Office P.O. Box 202 Richland, WA 99352		EXAMINER METZMAIER, DANIEL S		
		ART UNIT 1712		PAPER NUMBER

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/045,948

Applicant(s)

ZEMANIAN ET AL.

Examiner

Daniel S. Metzmaier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2004 and 22 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-25 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9 and 11-20 is/are rejected.
- 7) ☒ Claim(s) 6 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/2/03</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Claims 1-25 are pending.

#### ***Information Disclosure Statement***

1. The Information Disclosure Statement (IDS) filed September 2, 2003 was filed before the mailing of the Final Office Action on September 11, 2003. Said requires either a certification statement or a fee as set forth in 37 CFR 1.97(e) or a fee set forth in 37 CFR 1.17(p). Applicants provide a charge account for said fee in said IDS.
2. The information disclosure statement filed September 02, 2003 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the reference citation fails to provide a place of publication and a date of publication. It appears the reference was obtained from an unnamed database. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

#### ***Specification***

3. The disclosure is objected to because of the following informalities: applicants should update the status of the application on page 7 of the application.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5, 7-9 and 11-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Battelle Memorial Institute, WO 0/56450. Battelle Memorial Institute (abstract, examples and claims) disclose treating mesoporous materials with silanes under supercritical conditions to form monolayers. While the materials are characterized in the reference as mesoporous silica, the claims set forth ceramic oxide aerogels. The structure of both ceramic oxide aerogels and metoporous silica are the porous silicates and have not been shown to be distinct.

6. Claims 1-5 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Cabot Corp, WO 99/36355. See abstract and claims. The claimed characterization of a monolayer would have been inherent to the Cabot Corp reference since all available surface groups would have reacted to form the hydrophobic silica.

7. Claims 1-5 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Hrubesh et al, US 6,005,012. See abstract, examples and claims. The claimed characterization of a monolayer would have been inherent to the Hrubesh et al reference since all available surface groups would have reacted to form the hydrophobic silica.

8. Claims 1-4 and 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Teicher et al, US 3,562,177. See abstract, examples and claims. The claimed characterization of a monolayer would have been inherent to the Teicher et al compositions since all available surface groups would have reacted to form the ammonium coated silica.

***Allowable Subject Matter***

9. Claims 6 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 21-25 allowed.

11. The following is a statement of reasons for the indication of allowable subject matter: See paragraph number 8 of the Office Action mailed September 11, 2003.

***Response to Arguments***

12. Applicant's arguments with respect to claims 1-5 and 7-9 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**Daniel S. Metzmaier**  
**Primary Examiner**  
**Art Unit 1712**

DSM